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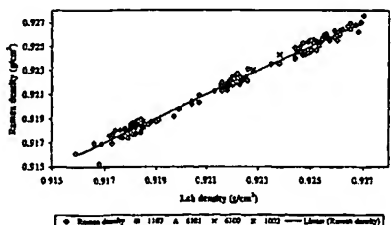
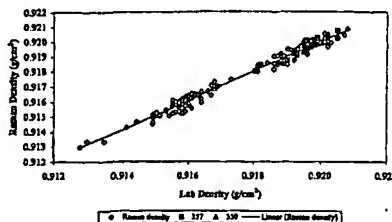
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(54) Title: ON-LINE MEASUREMENT AND CONTROL OF POLYMER PROPERTIES BY RAMAN SPECTROSCOPY



(57) Abstract: Methods are provided for determining and controlling polymer properties on-line in a polymerization reactor system, such as a fluidized bed reactor. The methods include obtaining a regression model for determining a polymer property, the regression model including principal component loadings and principal component scores, acquiring a Raman spectrum of a polyolefin sample comprising polyolefin, calculating a new principal component score from at least a portion of the Raman spectrum and the principal component loadings, and calculating the polymer property by applying the new principal component score to the regression model. The property can be controlled by adjusting at least one polymerization parameter based on the calculated polymer property.

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## C. DOCUMENTS CONSIDERED TO BE RELEVANT

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| Y          | US 6 144 897 A (SELLIERS JACQUES DE)<br>7 November 2000 (2000-11-07)<br>column 11, line 8 - line 36; claims       | 1-48                  |
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